

ABSTRACT

A cache pollution avoidance unit includes a dynamic memory dependency table for storing a dependency state condition between a first load instruction and a sequentially later second load instruction, which may depend on the completion of execution of the first load instruction for operand data. The cache pollution avoidance unit logically ANDs the dependency state condition stored in the dynamic memory dependency table with a cache memory "miss" state condition returned by the cache pollution avoidance unit for operand data produced by the first load instruction and required by the second load instruction. If the logical ANDing is true, memory access to the second load instruction is squashed and the execution of the second load instruction is re-scheduled.